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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,317	02/15/2006	Atsuhiro Kawamoto	39709	4655
52054	7590	01/11/2008		
PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			EXAMINER SHAW, CLIFFORD C	
			ART UNIT 1793	PAPER NUMBER
			NOTIFICATION DATE 01/11/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patdocket@pearne.com  
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**Office Action Summary**

Application No.

10/568,317

Applicant(s)

KAWAMOTO ET AL.

Examiner

Clifford C. Shaw

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>0215</u>                                                      | 6) <input type="checkbox"/> Other: ____                           |

**Detailed Action**

- 1.) The drawings are objected to. Figure 4 is to be labeled as "Prior Art".
- 2.) In the "Information Disclosure Statement" (IDS) filed on 2/15/2006, the Foreign Patent Documents labeled as "L", "N", and "P" have been lined through as not considered. No copies of these documents have been received.
- 3.) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 4.) Claims 1-5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Parks et al. (4,866,247). The discussion at columns 1-2, figure 1, figure 2, and the discussion at columns 10-11 disclose an arc welding control method with the features claimed, including the steps of repeating a short circuit period and an arc period and controlling the output current just after arc recurrence to be higher than the current just before arc recurrence for a set given period (see especially figure 2, the graph with the y-axis labeled "current" and note the short circuit period between T2 and T3 and the arc period between T3 and T4). In regard to claims 3 and 4, note that since the current levels are controlled to be specific values, they will inherently have the arithmetic and multiplicative relationships claimed (i.e., the peak arc current will necessarily

equal the short circuit current plus some constant; the peak arc current will necessarily equal the short circuit current times some constant). In regard to claim 5, the same is broad enough to read on the voltage control set forth in column 8, lines 20-45 wherein the output current is controlled based on the difference between "a welding output voltage", i.e., the voltage  $dv/dt$ , that is compared to a set voltage.

5.) Claims 1-5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogasawara et al. (4,546,234). Figure 3 and the discussion at columns 4-5 and 11-12 in the patent to Ogasawara et al. (4,546,234) disclose an arc welding control method with the features claimed, including the steps of repeating a short circuit period and an arc period and controlling the output current just after arc recurrence to be higher than the current just before arc recurrence for a set given period TAP.

6.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7.) Claims 6-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (6,002,104) taken with Parks et al. (4,866,247). Figures 1 and 2 and the discussion at columns 6-9 in the patent to Hsu (6,002,104) disclose an arc welding machine with voltage and current detection at elements 50 and 42, and various waveform amplitude and timing parameter setting arrangements as in figure 2. The claims differ in calling for a specific waveform characteristic as set forth in the last paragraph of claim 6. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have used the machine of Hsu (6,002,104) to implement any conventional current waveform. In particular, it would have been obvious to have implemented the waveform claimed, the reason being the teaching of Parks et al. (4,866,247) that such is a conventional current waveform for welding (see the current waveform in figure 2 of Parks et al. (4,866,247)).

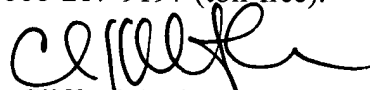
Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jonathan J. Johnson, can be reached at 571-272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw  
Primary Examiner  
Art Unit 1793

January 5, 2008